

# MICROPLASMA EMISSION SPECTROMETER

## Abstract

A microplasma emission spectrometer is described that includes a chamber for confining a sample volume of gas. A microplasma source that includes a resonant antenna structure generates a microplasma in the chamber from the sample volume of gas. A RF power supply provides power to the resonant antenna structure that generates the microplasma from the sample volume of gas. A spectrally sensitive detector is optically coupled to the microplasma. The entrance of the spectrally sensitive detector has dimensions and is positioned so that emissions from at least one-tenth of a total volume of the microplasma are transmitted through the entrance of the spectrally sensitive detector.